

The relationship between measures of doubtful receivables and cost of money in the agriculture bank

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Abstract: Mobilization and allocation of investment resources to economic activities carried out by the credit markets, banking and financial markets as part of the market. This is done as the main role of banks in the financial market are done through credit customers. The population in this study was Yazd province Bank (50 branches) and sample was conducted of 50 chapters and sample census. The data from the financial statements for the five consecutive years from 2008 to 2012 bank branches is obtained. To analyze the data was used Spearman- Pierson correlations and multiple regression. These findings suggest that there is direct relationship between the credit risk, Doubtful receivables, collateral kind of doubtful receivables, chronological age of doubtful receivables with cost of money in Yazd agricultural Bank.

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Introduction

Mobilization and allocation of investment resources to economic activities carried out by the financial markets, banking credit markets is as part of the market. This is done as the main role of banks in the financial market are done through give credit to customers. So one of the important issues is investigate and assess the credit risk (the risk of default in repayment of loans granted by the customer). The measurement of this risk through the risks that the Bank faces a wide range of performance, is a special place. Reduction and risk control as an important factor to improve the process of credit and consequently raise the banks' survival and essential role is in the continuity of facilities banks and financial institutions. Assess the significance of these risk factors can be mentioned the following:

A. Credit risk is the main cause of bank failures. If the customer does not repay your obligations on time, loans become as overdue the bank receivables and causing disruptions in the distribution of bank credit and finally disturbances in the country's economic.

B. Measuring the credit risk with a prediction of credit losses of non-repayment and make of a negative relationship between risk and return, the possibility of optimizing the composition of credit portfolio, asset pricing and economic capital of banks to reduce capital expenses, and to remain competitive and the banks and credit institutes some kind of advantage provides;

C. On one hand, banks activity is based on in interest-free banking law and Islamic contracts and therefore can not distinguish border between money market and capital . On the other hand, according to the country's economic structure, capital market

operations (securities and stock markets) and other non-bank channels, is not considerable progress so significant part of the investment is done by banking market . It is important to the success of banks in this State;

Iv. In the interest system after the loan, the bank is cut off communication with the money and the bank regardless of the type of business, will demand the principal and interest of their money; Thus, taking a sufficient guarantee, does not need to accurately assess the customer (and if the evaluation is performed, in order to facilitate transactions and selected better customer), while the Islamic banking system, the bank is partner of receiving facilities in the economic activities and given share of person is considered as a warranty .

In order to reduce these risks and costs resulting from an increase in deferred receivables, banks and credit institutions in recent years with regard to the recommendations of the Bal Committee, has been paid much attention to rank and validate of their customers. The ranking is the method by which banks can also measure the credit risk of customers, but also to take over the control and management. Recent years due to increased volume of pending receivables and past due in banks, ratings subject and customer validation has been addressed in most banks (Taghavi et al, 2010). So according to cost of money can be effective in reducing credit risk and vice versa receivable facility and reduce credit risk can be effective at cost of money, because this topic has not yet been scientifically evaluated can help bank managers and economical managers . Since the cost of money, usually a is measured at the macro level of bank and in the provinces has been little attention , The calculation of this factor and their association with

credit risk could be interesting at Agricultural Bank of Yazd .

A review of the literature of topic

Accreditation

With the continuous and dynamic development of credit industry, industry will play a more important role in the country's economy and the creditors in order to develop the credit management process are used new tools and technologies . Validation and assessment of repayment capacity of customers by using advanced and new statistical techniques are the efforts that have been made in this area. Validation is evaluate and assess the capacity of costumers repayment and financing facilities and the possibility of non-repayment of funds received by them. Today have developed systems to validate customers such' credit scoring 'and' customer credit ratings " (Yangloee, 2001). Occurrence of banking crises in industrialized countries in recent decades, especially in developing countries due to such volatile deposits, an increase in deferred receivables, banks, the economic downturn and so disrupt in financial markets and provide the bankruptcy of many banks. During the evaluation, the main happening reason is identified lack of capital adequacy of banks. The concept of risk and management is further reflected (Hemmati and Mohebi nejad, 2009). Cost of money in the bank depends on several factors, the most important factors in determining the cost of money are operating non-operating funds. So one of the ways the trust of customers are motivating them to deposit further and away from the false market by increasing earning rates commensurate with the Inflation rate . Development administrative and personnel costs due to inflation and increased costs related to doubtful receivables included the items that will increase non-operating expenses and consequently will the cost of money.

Mawazo et all(2014) in a study as "evaluation of credit risk and effect of new agreement about Bazel investment in small and medium firms: Experimental analysis" showed that the probability of default risk in future year depend on making profit, funds, supports. The smaller firms with banking communication will have more default risk. The results showed that banks have more motivation to decrease their risk through increase of margins.

Castero (2013) performed a study as "macroeconomic factors of credit risk in banking system; GIPSI case" .In this study the relationship between macroeconomic development and credit risk of banks in Greece, Ireland, Portugal, Spain and Italia countries that effected from unsuitable financial commercial conditions, is studied. The results of this research showed that all politic standards which effect on development, employment rate efficiency can be

use as important factor to decrease public and foreign debts in studied countries, also they play important role in providing of commercial stability and they should consider as necessary factors. Dalsiva and Dioyeno (2013) performed a research as "role of baking regulations in a economic which is under credit risk and shocks of funds in Brazil" The results of this research showed that credit risk is a period so that the default risk depend on structural properties and decision makers of baking system should decrease the changes in outputs by selecting suitable policies in order to achieve financial stability development and efficiency rate.

Credit Scoring

Credit scoring is a system by which banks and credit institutions by using information from current and past applicants shall assess the probability of loan non- repayment by him (YanglOee, 2001). In other words, score means the default quantitative of probability in the future. This approach are ratings customer credit based on unbiased and quantitative data.

Credit risk

It is obvious that primacy of credit risk associated with economical mechanisms and, consequently, most of the banks consider ' internal ratings system for improvements borrowers. Credit risk will be achieved the uncertainty in determining a partner's ability to achieve its objectives. Increased diversity in the types of partners and a wide variety of forms, functions are types of credit risk management and have been transferred to the head of risk management activities and are used by companies in the financial services industry (Shamsodin, 2010).

Credit risk indicators:

When facilities based on criteria must be vigilant it comes to action, it is necessary to identify indicators of credit risk facilities. The indicators are divided into two categories: credit information and financial statements:

A) Credit Information: Information that users' evaluation approve or reject the results of past and present events or expectations about future events of economic unit, Credit information index are classified as follows:

B) 1 - Work experience of the applicant, 2 - Capital 3 - The amount of the returned check, 4 - The amount of obligations to other banks, 5 - extent of collateral

C) financial statements: To evaluate the financial condition of borrowers and determine their ability to repay their obligations, there are various tools and indicators. One of these indicators to facilitate payment, various financial statements. Balance sheet

and earning statement comprise basic financial statements.(Karami,2010)

Cost of money

One of the important factors that affect the prices of banking services and facilities are paid by the banks is cost of money in the banking system ,of course the price increase and decrease dependent a lot of reasons. Over the past few years due to expensive credit that one of the its reasons, according to banking experts and activists is cost raise money in banks always make the banking system has been criticized by consumers and entrepreneurs that expensive facilitator banks alongside others the problems they have faced with many obstacles.

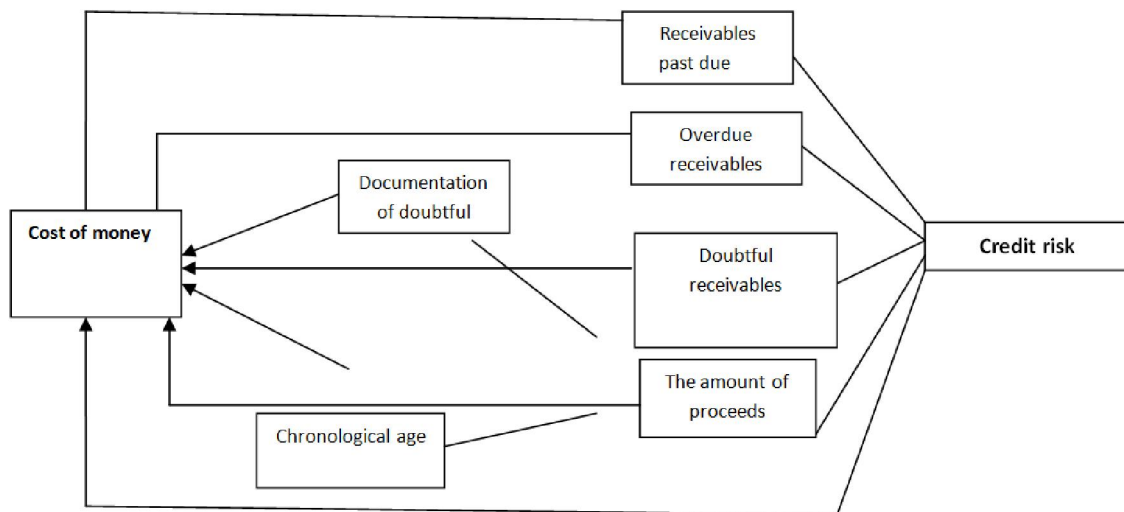
Affecting Factors to the cost of money

On the growth of operating costs can be argued that when Interest rates on deposits are lower than inflation ,depositors in the banks do not want to depositors, Because inflation reduces their purchasing power and decreases value of money. A. Ahmadian (2012) in a study titled "credit risk management, financial challenge of the banking system" with the aim of formulating a model reducing the existing gaps between the banking system and the private sector in the field of finance from the perspective of the challenges facing the banking system one hand and businesses by the end of operational strategies for reducing gaps between the private banking section is presented in the field of finance process improvement financing. Castro (2013) conducted a study entitled "

macroeconomic factors of credit risk in the banking system: the GIPSI" did. In this study, the relationship between credit risk and macroeconomic developments in the countries of Greece, Ireland, Portugal, Spain and Italy, which have affected recently due to adverse economic and financial conditions examined. The findings of this study indicate that all political measures that could promote growth, employment, productivity and competitiveness and to reduce public debt and foreign run are essential to stabilize its economy. Silva and Divinu (2013) conducted a study entitled "The role of the banking laws in an economy of credit risk and liquidity shock" did in Brazil. Results of this study showed that credit risk is the risk of default depends on the structural features. Accordingly bank policymakers can adjust policies to promote financial stability and efficiency, reduce fluctuations in output. Paula at el (2012) conducted a study entitled "Evaluation of credit risk and the impact of the new capital accord Basel in small and medium enterprises: an empirical analysis" showed that the risk of non-default probability in the next year, subject to increase profitability, liquidity , cover, and reduce the operating leverage. Smaller companies and those associated with a higher risk of default, the bank probably will. The findings suggest that a major bank to enter implementing policies to reduce risk through margin increases that were previously too high, it is very motivated.

Conceptual model
Criterion variable

Predictor variable



The main hypothesis of this study:

there is a significant relationship between the credit risk of the customers with cost of money in Yazd province bank.

The secondary hypotheses of research:

there is a significant relationship between doubtful receivables with cost of money in Yazd province bank

there is a significant relationship between Doubtful receivables collateral with the cost of money in Yazd province bank.

there is a significant relationship between chronological age of doubtful receivables with the cost of money in Yazd province bank.

Materials and Methods

This study aimed to investigate the correlation between credit risk according to the customers with' cost of money is the Agricultural Bank, is descriptive correlation method.

The population in this study is Yazd Branch of the Agricultural Bank, 92 branches in five consecutive years from 2008 to 2012 . The sample included 50 Yazd Branch of the Agricultural Bank sample census was conducted.

The method of data analysis is the Pearson correlation test.

Credit risk, including overdue receivables, deferred and remains doubtful for the whole facility is divided into automatic bank risk is represented obtained.(Jamaat and Farid Askari,2009)

Standard credit risk in banks is five number but in Iran for various reasons, credit risk is much higher the figure.

1 - total account balance of current and non-current receivables after deducting the balance of guarantees or collateral demands of our current 5/1% of the general store

2 - Balance past due receivables that are more than 2 months and less than 6 months have passed their maturity from 10% applied to the type of collateral or guarantee a specific store

3 - Balance claims pending for more than 6 months and less than 18 months past their due after application of collateral or a guarantee equal to 20% store.

4-Doubtful receivables account balance that is more than 18 months and less than five years after the imposition of collateral or a guarantee of a particular15% store.

5 - doubtful receivables account for more than 5 years past their due bond or guarantee, 100% after applying a particular store (adoption of a Council of Ministers, 2009).

Percent reserve	time	Demands	row
1.5	0	Current Facility	1
10	From 2 to 6 months	Receivables past due	2
20	From 6 months to 18 months	Overdue receivables	3
50	From 18 to 5 years	Doubtful receivables less than 5 years	4
100	More than 5 years	Doubtful receivables over 5 years	5

Cost of money

$100 * \frac{\text{Total costs of non-interest}}{\text{Total cost of interest}} = \text{Cost of money}$

Used resources total of money

Interest costs: Include deposits interest, financing costs and bonuses of savings loan, It is explained that the cost of financing is the costs that the credit balance of center account from bank input and output Operations .has been awarded to the left as far as revenue goes to debt capital account.

Non-interest expenses: is include administrative costs, staff costs, depreciation and doubtful receivables

Total resources used include total bank assets or liabilities that are extracted from the financial statements of banks.

The total calculation of the age range is calculated with the calculation of the cost of money in a fiscal year can be achieved. Of the National Bank internal memos

Results

Analysis of research hypotheses

There is relationship between Doubtful receivables and cost of money in Yazd province bank.

There is relationship between Doubtful receivables bond collateral with the cost of money in Yazd province bank.

There is relationship between Doubtful receivables chronological age with the cost of money in Yazd province bank.

As can be seen in the table below, the relationship between credit risk, overdue receivables,

pending receivables, the cost of money is equal 392/0, 684/0, 793/0, 655/0-, 791/0, 698/0, 899/0. With significant respectively (011/0, 003/0, 002/0, 008/0 001/0, 002/00 and 001/0) and because significant they are smaller than the significance level we reject the lack of assumption and therefore that there is a positive correlation relationship between credit risk,

overdue receivables, pending receivables with the cost of money .Means with increases in these variables, the cost of money in National Bank of Yazd will increase, and between collected with cost of money is suit all negative and significant inverse relationship. The increasing cost of money with collected in Yazd Agricultural Bank reduced.

Cost of money				Variable
Type of Relationship	Relationship	Significant	Pearson's correlation coefficient	Variables
Direct	Ok	0/.011	/392	Credit Risk
Direct	Ok	.001	/791	Doubtful receivables, ,
Direct	Ok	.002	/698	collateral kind of doubtful receivables
Direct	Ok	.001	/899	chronological age of doubtful receivables

Discussion and Conclusion

According to the survey 83/7 percent of the remaining non-current receivables are concentrated in four sub-sections, thus validating subsection 42%, agriculture with 1/30 per cent, industries outside of the 9/6 to percent, and agricultural services 7 / 4 percent, are allocated the biggest share of the remaining non-current receivables to the province. The maximum credit risk related to industry sectors outside of the risk 9/23 show few signs of risk associated of agricultural trade with a 1% risk. 58 percent of non-current receivables at doubtful floor, 13% percent at suspended floor and 29% in class in overdue receivables. The maximum credit risk related to industry sectors outside of the risk 9/23 show few signs of risk associated of agricultural trade with a 1% risk . agricultural services, despite having a high proportion of non-current receivables due to higher pay, the risk is lower than average. 83% of past due receivables, 79% of pending receivables and 89% of doubtful receivables are focused

On department of horticulture, agriculture, industry, outside of ,the water, soil Business services.

Credit risk of 2008 to 2012 five fiscal years is as follows:

Year2008: 4/15 year2010 :3/21 year 2012 : 11/9

Year 2009 :7/25 year90 :8/16

Cost of money of 2008 to 2012 five fiscal years is as follows:

Year2008: 2/11 year2010 :8/16 year 2012 : 9/13 year2009 :6/14year2011 :4/10

In 2009 the rate of decline in the cost of credit risk did not decrease below is brief.

1 - The amount of the proceeds are greater than the level of overdue and deferred that doubtful

receivables expenses were paid less than the floor it is doubtful

.2 - Considering the fact that in 2009 most of receipt of the location of extended facilities drought so the receiving facility paid virtually no effect not central account (cash paid on collection receipt has not) as a result it is not impact fees to finance the cost effective.

3-in other years except 20012 direct impact in reducing the cost of money and credit risk reduction is clearly visible. According to the Central Bank of the Islamic Republic in2012 interest rates of deposit have risen significantly in regard to the rest of the end of year do not have a significant impact. However, increases in interest costs that increase the cost of money has a significant role Outer graph is disconnected although credit risk declined, the cost of money has increased.

The following table should be identified much and precedent costs and supplying financial center as well as the total amount of interest costs.

Percent interest on deposits to total deposits in 2008 to 2012 is as follows:

2009	96/23%
2010	04/24%
2011	40/77%
2012	50/90%

Additionally, due to increased interest rates changed interest rates on Yazd. share of interest-bearing deposits and the composition of the deposits is simulated as follows.

Current Account	4/11%	
Company Current	4%	
Current Mehr Gostar	2/5%	
Savings for women	7/3%	
Ungainly	5/27%	
Current agricultural	2/3%	
Savings loan	6/14%	} %5/72 Interest-bearing
Types of short-term	5/22%	
Types of long-term	6/28	
Tabasom Plan	5%	
First Fund	8/1%	

As can be seen desire of investors increased to the interest-bearing deposits and the share of these deposits is 5/72% the cost of interest banks have been high and subsequently cost of money increased.

It is recommended:

1 - All regulations should be considered in the receipt payment that the bank is not difficult.

Considering the order of doubtful receivables, pending and overdue have the greatest impact on the cost of doubtful receivables is recommended.

2 - The bank strategic objectives at the credit risk reduction should focus on more in order to attain a doubtful receivables, receivables overdue and pending receivables since reduce doubtful receivables expenses in the bank rate.

3-According to the calculation of the effect of the guarantee facility cost doubtful receivables is recommended when possible payment facility should be used of the type of property collateral backing, bonds and cash deposits. Considering the impact of paid work to finance the remaining capital cost of money is effective.

4 - Balance Center considered to be bank managers.

5 - With regard to the issues raised by the summary and conclusions neither deposit facility should be determined based on the cost of money to the banks cost of money is equivalent

6 - also, for the transparent transfer fees doubtful receivables overdue receivables facility to the season, in due time shall be deferred.

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